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LOU deBOTTARI: Lou deBottari, d-e-capital B-o-t-t-a-r-i.

I have reviewed and commented on all the documents DOE has required the public to comment on. I have yet to receive, and I doubt if I ever will, receive any answer of substance.

I have had a concern and expressed it to the

DOE on the approach they use to evaluate the impact of radiation releases due to accidents during transportation and while deposited at the Yucca Mountain site.

DOE uses an adult as the model to determine the effect of radiation, plus they derive the damage from victims to the bombs used in Japan. They assume that the damage due to radiation is a linear function over many magnitudes and that it can be scaled down to the level of interest. They also assume that Mother Nature handles radiation effects on the body in a linear fashion. These are faulty assumptions, and I will try to explain why, by using this data, the pregnant woman and young child are in grave danger. I'll divert a minute here.

In 1953 when we started the above-ground testing, there were concerns of scientists throughout the

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world about some of the elements that we were putting in the atmosphere. DOE started measuring, and so did England, the effects of Strontium-90 in the bones of adults who had died. They continued this measurement until 1982.

In 1963 we signed a test ban, and it's interesting to note that from 1964 to 1970 the amount of Strontium-90 in the atmosphere dropped at a calculated rate, as predicted, of about 15 percent per year. Interestingly enough, in 1970 the slope started changing

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as if somebody was adding Strontium-90 to the atmosphere. It was about this time that the nuclear power industry started building nuclear reactors.

Strontium-90 mimics calcium, and thus the body stores this ionizing element in the bone marrow. This is not conjecture as DOE used this method to determine the amount of SR-90 in the environment, and they continued that measurement until 1982.

In 1980 EPA started measuring the amount of radioactive material in milk. In 1982 the amount of Strontium-90 in the atmosphere was equivalent to what it was in 1951, so all the test bans that we had done did nothing to decrease the amount of Strontium-90.

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This element ionizes oxygen molecules in the body and converts the oxygen to a free radical. This means that it tries to find cells where it can get another electron and, thus, in the process either destroys developing cells or damages them.

Various groups correlating the amount of Strontium-90 in the bones or baby teeth to childhood cancers, breast cancer, infant mortality rates and congenital birth defects have made the measurements, and it is clear that this -- there's been a significant increase since 1970. It also has been shown that there is a significant increase in Strontium-90 ingested from a

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sample from a person downwind of a nuclear power plant than from a sample upwind.

There have been two data gatherings that indicate that birth deaths decreased when a nuclear power plant was either shut down permanently or for a period of two years. When a plant was restarted after two years, the birth deaths increased 19 percent. There is a problem with very low emissions from nuclear power plants that are impacting our future generations.

The DOE has continually told the public that

natural radiation is good for us and that the body receives more of a dose from one X-ray than what will be received by a person standing at a prescribed distance from one of the casks being transported. In fact, DOE scientists have testified that radiation in small quantities is good for us. How wrong they are.

A study first published in 1972 by a Canadian scientist working for the Canadian Atomic Energy Establishment found that radiation would damage a living cell and that the damage was more severe when the radiation level was very low, ten millirems, and continuous. He found that the cell could take many times the dose or dose rate if the period was short. This revelation clearly showed that the original DOE premise about being able to scale down a large pulse from a bomb

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to low continuous radiation was flawed when attempting to predict the damage to the human body.

Further experiments by others showed that a living cell was not damaged by the natural radiation ever present. Mother Nature, during evolution of oxygen-breathing mammals, gave the female an enzyme that neutralized the production of free radicals while the

baby was in the mother and continued after birth while cells were being developed. If we didn't have that, we'd never be here today.

It was determined that a very small amount above the natural radiation -- this was a test they made -- produced by man damaged evolving cells and thus caused cancers mentioned earlier.

The DOE has never refuted this information. In fact, the answer was to stop measuring, and, therefore, if you don't measure, you don't have to report and maybe it will go away.

I hope you all will take this message and go forward to tell people about this danger that will be around as long as the present nuclear power plants are operating. It will also be around as long as Strontium-90 is present. This means it will be dangerous and a high-level nuclear waste for 100 years.

DOE should place the waste in dry storage

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where it is presently located for the next 100 years. Work on a method to guarantee that there will be no low-level emissions, I mean zero for the life of the plant.

If they can't guarantee no leakage for at least 50 years from a plant before it has to be shut down, how in the world do they expect the public to believe they can create a miracle and design a facility that will not leak for thousands of years.

There are health problems at present associated with nuclear power plants, and to have the potential to spread this nuclear virus throughout the country by transportation is a despicable act by the DOE and their cohorts, the nuclear power industry.

Thank you.

[Other commenters spoke, and then Mr. DeBottari spoke again.]

LOU deBOTTARI: Lou deBottari.

I spoke earlier about the very low-level protracted radiation that DOE continually doesn't want to recognize.

There's a recent report from a research group at the University of Chicago about deformities in births.

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In 1970 there were 20 -- let's see -- in 1970 there were 20 babies that died as infants and in 1997 7.1 died. That sounds like we're coming down, but that doesn't -- it doesn't include the amount of congenital malfunctions

-- malformations became more prominent.

In 1997 there were -- 22.1 percent of all baby deaths were because of congenital malfunctions and 15 percent in 1970. This ties in directly with what I spoke about earlier about the very low-level ionization that upsets the cell development in the fetuses and in young children when you exceed the natural radiation.

There's tests that have been done, just for the people who didn't know this, that show that you will deform or destroy a cell with as little as ten millirems of radiation if it's long term.

Now, DOE keeps talking about the X-ray. We have learned that you can't X-ray a woman who is pregnant because of that problem, but you get less damage from a one-shot X-ray in a year than you will get -- a baby up to four years of age will get from four millirems.

Now, that's the thing about the health, so when you talk about nuclear power plants not contaminating the atmosphere, you're wrong. It doesn't put out the greenhouse effect. It puts out a material that lasts for over a hundred years. It's called

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Strontium-90.

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For your information, the Oyster Creek plant nuclear reactor in Oyster Creek released since 1970 76.8 curies of radiation. The Three Mile Island only did 14.1 curies. Curies, when you relate that -- you need picocuries is the danger point when you talk about radiation. So you say there's been no deaths. It's how you define deaths. If you go by the DOE, you're right, but you have to go look at how many kids weren't born or how many kids were deformed, and that's the number that you don't have. That's number one.

Number two, one of the prime examples quoted by the proponents of nuclear power is to show how France has done such a sweet job. France is the size of Texas. Their total transportation routes are no bigger than the size of Texas. They have a lot more nuclear power plants, and for years they were recycling and reprocessing, and they ended up with that 18 percent. The lady who is not here now who wanted to talk about reprocessing, there's 18 percent of actinides, which have a half-life of over a million years. These things are very dangerous, so dangerous that the French didn't know what to do with them. For a while they were dumping them in the ocean until the other people around the area

25 started screaming about it. They are having a problem
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1 with that -- with the actinides in France, but the most
2 interesting thing about France is that their thyroid
3 cancer is three times the average of Europe.
4 So when anybody talks about nuclear power,
5 you have to talk about health, not the deaths, but the
6 health, the quality of life of people, and you're not
7 going to get it from nuclear power unless you can make a
8 facility that has guaranteed zero leakage to the
9 atmosphere, and I don't think men can do that.
10 I have one more comment about the geology.
11 In 1974 the Academy of Sciences suggested
12 that the best place for a deep repository -- and they
13 said they wanted it to have 95 percent natural and 5
14 percent engineered. In case you don't know, at this time
15 Yucca Mountain is 95 percent engineered and 5 percent
16 natural. We're trying to play God and design something
17 that God can't do at Yucca Mountain.
18 Thank you.

[Other commenters spoke, and then Mr. DeBottari spoke again.]

LOU deBOTTARI: Lou deBottari.

10 I spoke very early today, and a lot of people
11 didn't understand what I was saying, I don't think.

One of the biggest problems that I see is that DOE clearly has tried to have everybody focus on the nuclear waste, which is a nice way because then all the people in other parts of the country don't have to worry, it's only our group.

Now, the real problem in this country is not the waste, it's the nuclear reactor, and the real problem is not the Three Mile Island accident or the Chernoble accident. It is the safe, quote, safe operation of nuclear power continuously running to the specs that DOE and the NRC have set with EPA where they allow a very small amount of emission from these plants.

Now, it doesn't sound like much. You'll hear the DOE say, all the people, the proponents for nuclear

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power, that they don't have the CO2 problem of global warming. What they have is a very low-level radiation output, continuous.

Now, is that a problem? You heard earlier about the atmospheric testing. Atmospheric testing put -- they were concerned about the Strontium-90 in the testing, and in 1964 they stopped atmospheric testing. The amount of Strontium-90 in the atmosphere today

downwind from nuclear power plants is greater than it was in 1951, so all the work of cutting out atmospheric testing, if you live within ranges of where the wind blows and you have a nuclear reactor, you are in trouble. It is a very low-level protracted radiation that's the problem. It is not the pulses that you get from X-rays. They are dangerous, but not as dangerous to pregnant women and young kids. The problem is that when you have the very low level of radiation, it affects the growing of the cells, it disturbs the cells. It knocks off -- let me backtrack.

Strontium-90 mimics calcium, and, therefore, it stores -- the body gets confused and stores it in the bones of people. When Mother Nature figured this out a long time ago during evolution, and they -- and protected the mother, the fetus and when a child was up to about four years old with an enzyme that neutralized the

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natural radiation so you don't get any effects from the natural radiation. There are cancer cells in all our bodies, but they're very low, and other carcinogens can affect it, such as pollution.

But the fundamental thing with nuclear energy

is that it has been shown clearly that kids who live downwind of nuclear plants have three times the Strontium-90 in their teeth as kids who don't live in the area. Women who live downwind of nuclear power plants have a significant increase in breast cancer than women who don't live in those areas.

You'll find that all the childhood cancers -- asthma, another one -- is all affected by the way the cells are developing. DOE doesn't want to let us know about this, and I'll tell you why.

During the atmospheric testing, the Atomic Energy Commission, which was the forerunner of DOE, used to measure the Strontium-90 in the bones of dead people. Recently you saw in the paper where England also was doing it, and they got concerned, both countries, that there was a problem, and that's why the test ban went into effect.

DOE kept on measuring the Strontium-90 in bones until 1982, then they quit. Why did they quit? Because they would have to report what they measured, and

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if anybody was reading their reports, you would see that the increase was growing. Like I said earlier, in 1981

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it was the same as it was in the late '50s, in the early '50's rather, so it was increasing. They knew what the problem was, and they haven't figured out how to design a nuclear reactor so that it does not release any very low-level material. That's the problem.

EPA was measuring radioactive material in milk until 1980, and then they stopped. Absolutely the nuclear power industry has got a big hammer on this country, and by focusing it on nuclear waste, they have isolated one group, namely Nevada, and I'm telling you all that the answer is to get out and tell people -- and there's reports, a lot of reports out -- and by the way, DOE has never refuted this thing about the ionization at very low levels. There are test cells. They actually tested cells -- not DOE, believe me, they didn't do it -- and found that at ten millirems they were damaging cells.

Now, when you start thinking about that, if everybody in this country knew that we were impacting future generations, you'd have a hell of a lot of yelling about nuclear power, but by focusing on nuclear waste, they have isolated one state against the entire amount, and I think that is really bad.

I mentioned earlier about the fact of the

problem of young births. Recently there was a report out from -- let's see, let me get it here, bear with me. I have so many papers here that I can't keep up anymore. Here it is.

The congenital malformation in young kids, which includes infants born without brains, spines, kidneys or fully developed lungs, rose from 15 percent of the births in 1970 to 22 percent in 1997. Now, these things don't come accidentally. It's all in the way we are -- we have better medical and, yes, the birth -- the birth rate -- the birth deaths dropped. That's because people recently found that it was better to abort than to have the kid, but in the early days they didn't, and they were having more of those, so the birth deaths were up. Now the birth deaths are down, but the congenital malformations are up.

I can't stress enough that the people in this audience get out, write to your friends, and if you need information about where you can cite it, I'd be glad to give it to you. I don't know how to get it out to everybody in this country, but I think it's important.

Thank you.

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By the way, it's not only U.S., it's the entire world, and as third world nations start putting nuclear power in, we'll have more problems. If you

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realize that Three Mile Island, which was considered to be a bad thing, put out only 14 curies of radioactive material, the Oyster Creek reactor -- and I think it's in Connecticut -- put out 70 over the time it's been operating.